

ABSTRACT

The invention comprises, in one form thereof, a continuous processing apparatus for high temperature thermal treatment of granular materials. The apparatus includes a vertical conveyor means with an internal feed mechanism for transporting granular feedstock upward, an external export means for taking reacted product downward wherein said internal feed heats said granular feedstock by absorbing heat from the product flowing downward through said export means, and a heating means disposed around a top portion of said vertical conveyor means and said external export means.